

SEQUENCE LISTING



<110> FISCHER, Rainer
 SCHILLBERG, Stefan
 NAHRING, Jorg
 SACK, Markus
 MONECKE, Michael
 LIAO, Yu-Cai
 SPIEGEL, Holger
 ZIMMERMAN, Sabine
 EMANS, Neil

<120> Molecular Pathogenicide Mediated Plant Disease Resistance

<130> 0147-0189P

<140> 09/419,788

<141> 1999-10-18

<160> 168

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<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: synthetic, no
 natural origin

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33

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<223> Description of Artificial Sequence: synthetic, no
 natural origin

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28

<210> 3

<211> 1378

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<213> Artificial Sequence

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<223> Description of Artificial Sequence: synthetic, no
 natural origin

<400> 3

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aattgtttctc	accagttctc	cagcaatcat	gtctgcatct	ccaggggaga	aggtcaccat	180
gacctgcagt	gccagttcaa	gtgtaagtaa	aatgcaatgg	tatcagcaga	agtcaggcac	240
ctcccccaaa	agatggattt	atgacacatc	caaactggcc	tctggagtcc	ctggctgctt	300
cagtggcagt	gggtctggga	cctcttactc	tctcacaatc	agcagcatgg	aggctgaaga	360
tgctgccact	tattactgcc	agcagtggag	tagtaacccg	ctcacgttcg	gtgctgggac	420
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tgggcagggc	cttgagtggg	ttggatatat	taatcctaac	aaagacggta	caaagttcaa	660
tgagaagttc	aaaggcaagg	ccacactgac	ttcagacaaa	tcctccaaca	cagcctacat	720
ggagctcagc	agcctgacct	ctgaggactc	tgcggtctat	tactgtgcaa	gagactatga	780
ttacgactgg	tttgcttact	ggggccaggg	gactctggtc	actgtctctg	cagtcgacga	840
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cagcgccgag	gacctgggta	gagcagactg	tggcttaacc	tcggtgtcct	accagcaagg	1260
ggtcctgtct	gccaccatcc	tctatgagat	cctgctaggg	aaggccaccc	tgtatgctgt	1320
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<210> 4
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 <212> DNA
 <213> Artificial Sequence

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 <223> Description of Artificial Sequence: synthetic, no
 natural origin

<400> 4
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17

<210> 5
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<220>
 <223> Description of Artificial Sequence: synthetic, no
 natural origin

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 cagtatacaa atagtcacc agaaatactc cctatacttc tttagcgccg cagaacctcc 120
 acctccgtcg

130

<210> 6
 <211> 148
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 6

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gcaaattccg agcagcgctg ccaagaaagt caccaagagc aaagtcttc ccaatctcct 120
agcggccgca gaacctccac ctccgtcg 148

<210> 7

<211> 145

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 7

ggctctagac gctcgagttt aatcctctgc catgtagagt ctatacatga gagcaaccac 60
gagtgtgat atcgctggga tcaccaatt ggtccacat gaagagttag actcaacagc 120
ggcgcagaa cctccacctc cgtcg 145

<210> 8

<211> 130

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 8

ggctctagac gctcgagttt aagtgaagaa ataaataaca ataacaacaa caataatagc 60
acaaatagca ccaagcataa tcatcatctt acaattcttc caagcggccg cagaacctcc 120
acctccgtcg 130

<210> 9

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 9

gttttcccag tcacgac 17

<210> 10

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no natural origin

<400> 10

ggctctagac gctcgagttt agaaatgcct agatc

35

<210> 11

<211> 51

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no natural origin

<400> 11

ggctctagac gctcgagttt aagtgaagaa ataaataaca ataacaacaa c

51

<210> 12

<211> 900

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no natural origin

<400> 12

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acctgcagtg ccagttcaag tgtaagtaaa atgcaatggg atcagcagaa gtcaggcacc 180
tcccccaaaa gatggattta tgacacatcc aaactggcct ctggagtccc tggctcgcttc 240
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tgcaaggcct ctggatacac attcattacc tatgttatgc actgggtgaa gcagaagcct 540
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gagaagttca aaggcaaggc cacactgact tcagacaaat cctccaacac agcctacatg 660
gagctcagca gcctgacctc tgaggactct gcggtctatt actgtgcaag agactatgat 720
tacgactggg ttgcttactg gggccagggg actctgggtc ctgtctctgc agtcgacgga 780
ggtggagggt ctgcggccgc taagaagtat agggagtatt tcttgtggac tatttgtata 840
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<210> 13

<211> 918

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no

natural origin

<400> 13

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attgtttctca cccagtctcc agcaatcatg tctgcatctc caggggagaa ggtcaccatg 120
acctgcagtg ccagttcaag tgtaagtaaa atgcaatggg atcagcagaa gtcaggcacc 180
tcccccaaaa gatggattta tgacacatcc aaactggcct ctggagtccc tggtcgcttc 240
agtggcagtg ggtctgggac ctcttactct ctcaaatca gcagcatgga ggctgaagat 300
gctgccactt attactgcca gcagtggagt agtaaccgc tcacgttcgg tgctgggacc 360
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gtccagctgc agcagtctgg acctgagctg gtaaatcctg gggcttcagt gaagatgtcc 480
tgcaaggcct ctggatacac attcattacc tatgttatgc actgggtgaa gcagaagcct 540
gggcagggcc ttgagtggat tggatatatt aatcctaaca aagacggtac aaagttcaat 600
gagaagttca aaggcaaggc cactactgact tcagacaaat cctccaacac agcctacatg 660
gagctcagca gcctgacctc tgaggactct gcggtctatt actgtgcaag agactatgat 720
tacgactggg ttgcttactg gggccagggg actctggtca ctgtctctgc agtcgacgga 780
ggtggaggtt ctgcggccgc taggagattg ggaagaactt tgctcttggt gactttcttg 840
gcagcgctgc tcggaatttg cttgatgctc ttcattctga ttaagagatc taggcatttc 900
taaactcgag cgtctaga                                     918

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<210> 14

<211> 915

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no natural origin

<400> 14

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attgtttctca cccagtctcc agcaatcatg tctgcatctc caggggagaa ggtcaccatg 120
acctgcagtg ccagttcaag tgtaagtaaa atgcaatggg atcagcagaa gtcaggcacc 180
tcccccaaaa gatggattta tgacacatcc aaactggcct ctggagtccc tggtcgcttc 240
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gctgccactt attactgcca gcagtggagt agtaaccgc tcacgttcgg tgctgggacc 360
aagctggaga taaaaggctc tactagtggg tccgggaaga gctctgaagg taaagggtgag 420
gtccagctgc agcagtctgg acctgagctg gtaaatcctg gggcttcagt gaagatgtcc 480
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gggcagggcc ttgagtggat tggatatatt aatcctaaca aagacggtac aaagttcaat 600
gagaagttca aaggcaaggc cactactgact tcagacaaat cctccaacac agcctacatg 660
gagctcagca gcctgacctc tgaggactct gcggtctatt actgtgcaag agactatgat 720
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ggtggaggtt ctgcggccgc tggtgagtct aactcttcat ggtggaccaa ttgggtgatc 840
ccagcgatat cagcactcgt ggttgctctc atgtatagac tctacatggc agaggattaa 900
actcgagcgt ctaga                                     915

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<210> 15

<211> 900

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no natural origin

<400> 15

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acctgcagtg ccagttcaag tgtaagtaaa atgcaatggg atcagcagaa gtcaggcacc 180
tcccccaaaa gatggattta tgacacatcc aaactggcct ctggagtccc tggtcgcttc 240
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aagctggaga taaaaggctc tactagtggg tccgggaaga gctctgaagg taaagggtgag 420
gtccagctgc agcagtctgg acctgagctg gtaaatcctg gggcttcagt gaagatgtcc 480
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gagctcagca gcctgacctc tgaggactct gcgggtctatt actgtgcaag agactatgat 720
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<210> 16

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 16

gcggaattcg acgtcgccat ggccttctc ggcgacggcg gcgac 45

<210> 17

<211> 37

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 17

gcgaagcttg tcgaccggcg gtttgccggg ctggctg 37

<210> 18

<211> 1604

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 18

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aattgttctc acccagtctc cagcaatcat gtctgcatct ccaggggaga aggtcaccat 180
gacctgcagt gccagttcaa gtgtaagtaa aatgcaatgg tatcagcaga agtcaggcac 240
ctccccaaa agatggattt atgacacatc caaactggcc tctggagtcc ctggctcgctt 300
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cggcgcgac ctcgaccogt ccagcatccc cgacaaggaa caggcgatca gcgccctgcc 1500
ggactacgcc agccagcccg gcaaaccgcc ggtcgacgga ggtggagggt ctaagcacat 1560
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<210> 19
<211> 1050
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 19
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Gly Glu Lys Val Thr Met Thr Cys Ser Ala Ser Ser Ser Val Ser Lys
20 25 30
Met Gln Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile
35 40 45
Tyr Asp Thr Ser Lys Leu Ala Ser Gly Val Pro Gly Arg Phe Ser Gly
50 55 60
Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala
65 70 75 80
Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Gly Thr Lys Leu Glu Ile
85 90 95
Lys Gly Ser Thr Ser Gly Ser Gly Lys Ser Ser Glu Gly Lys Gly Glu
100 105 110

Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Asn Pro Gly Ala Ser
 115 120 125

Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ile Thr Tyr Val
 130 135 140

Met His Trp Val Lys Gln Lys Pro Gly Gln Gly Leu Glu Trp Ile Gly
 145 150 155 160

Tyr Ile Asn Pro Asn Lys Asp Gly Thr Lys Phe Asn Glu Lys Phe Lys
 165 170 175

Gly Lys Ala Thr Leu Thr Ser Asp Lys Ser Ser Asn Thr Ala Tyr Met
 180 185 190

Glu Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala
 195 200 205

Arg Asp Tyr Asp Tyr Asp Trp Phe Ala Tyr Trp Gly Gln Gly Thr Leu
 210 215 220

Val Thr Val Ser Ala Val Asp Gly Gly Gly Ser Met Lys Arg Met Leu
 225 230 235 240

Ile Asn Ala Thr Gln Gln Glu Glu Leu Arg Val Ala Leu Val Asp Gly
 245 250 255

Gln Arg Leu Tyr Asp Leu Asp Ile Glu Ser Pro Gly His Glu Gln Lys
 260 265 270

Lys Ala Asn Ile Tyr Lys Gly Lys Ile Thr Arg Ile Glu Pro Ser Leu
 275 280 285

Glu Ala Ala Phe Val Asp Tyr Gly Ala Glu Arg His Gly Phe Leu Pro
 290 295 300

Leu Lys Glu Ile Ala Arg Glu Tyr Phe Pro Ala Asn Tyr Ser Ala His
 305 310 315 320

Gly Arg Pro Asn Ile Lys Asp Val Leu Arg Glu Gly Gln Glu Val Ile
 325 330 335

Val Gln Ile Asp Lys Glu Glu Arg Gly Asn Lys Gly Ala Ala Leu Thr
 340 345 350

Thr Phe Ile Ser Leu Ala Gly Ser Tyr Leu Val Leu Met Pro Asn Asn
 355 360 365

Pro Arg Ala Gly Gly Ile Ser Arg Arg Ile Glu Gly Asp Asp Arg Thr
 370 375 380

Glu Leu Lys Glu Ala Leu Ala Ser Leu Glu Leu Pro Glu Gly Met Gly
 385 390 395 400

Leu Ile Val Arg Thr Ala Gly Val Gly Lys Ser Ala Glu Ala Leu Gln
 405 410 415

Trp Asp Leu Ser Phe Arg Leu Lys His Trp Glu Ala Ile Lys Lys Ala
 420 425 430
 Ala Glu Ser Arg Pro Ala Pro Phe Leu Ile His Gln Glu Ser Asn Val
 435 440 445
 Ile Val Arg Ala Phe Arg Asp Tyr Leu Arg Gln Asp Ile Gly Glu Ile
 450 455 460
 Leu Ile Asp Asn Pro Lys Val Leu Glu Leu Ala Arg Gln His Ile Ala
 465 470 475 480
 Ala Leu Gly Arg Pro Asp Phe Ser Ser Lys Ile Lys Leu Tyr Thr Gly
 485 490 495
 Glu Ile Pro Leu Phe Ser His Tyr Gln Ile Glu Ser Gln Ile Glu Ser
 500 505 510
 Ala Phe Gln Arg Glu Val Arg Leu Pro Ser Gly Gly Ser Ile Val Ile
 515 520 525
 Asp Ser Thr Glu Ala Leu Thr Ala Ile Asp Ile Asn Ser Ala Arg Ala
 530 535 540
 Thr Arg Gly Gly Asp Ile Glu Glu Thr Ala Phe Asn Thr Asn Leu Glu
 545 550 555 560
 Ala Ala Asp Glu Ile Ala Arg Gln Leu Arg Leu Arg Asp Leu Gly Gly
 565 570 575
 Leu Ile Val Ile Asp Phe Ile Asp Met Thr Pro Val Arg His Gln Arg
 580 585 590
 Ala Val Glu Asn Arg Leu Arg Glu Ala Val Arg Gln Asp Arg Ala Arg
 595 600 605
 Ile Gln Ile Ser His Ile Ser Arg Phe Gly Leu Leu Glu Met Ser Arg
 610 615 620
 His Arg Leu Ser Pro Ser Leu Gly Glu Ser Ser His His Val Cys Pro
 625 630 635 640
 Arg Cys Ser Gly Thr Gly Thr Val Arg Asp Asn Glu Ser Leu Ser Leu
 645 650 655
 Ser Ile Leu Arg Leu Ile Glu Glu Glu Ala Leu Lys Glu Asn Thr Gln
 660 665 670
 Glu Val His Ala Ile Val Pro Val Pro Ile Ala Ser Tyr Leu Leu Asn
 675 680 685
 Glu Lys Arg Ser Ala Val Asn Ala Ile Glu Thr Arg Gln Asp Gly Val
 690 695 700
 Arg Cys Val Ile Val Pro Asn Asp Gln Met Glu Thr Pro His Tyr His
 705 710 715 720

Val	Val	Arg	Val	Arg	Lys	Gly	Glu	Glu	Thr	Pro	Thr	Leu	Ser	Tyr	Met	
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Leu	Pro	Lys	Leu	His	Glu	Glu	Ala	Met	Ala	Leu	Pro	Ser	Glu	Glu	Glu	
			740					745					750			
Phe	Ala	Glu	Arg	Lys	Arg	Pro	Glu	Gln	Pro	Ala	Leu	Ala	Thr	Phe	Ala	
		755					760					765				
Met	Pro	Asp	Val	Pro	Pro	Ala	Pro	Thr	Pro	Ala	Glu	Pro	Ala	Ala	Pro	
	770					775					780					
Val	Val	Ala	Pro	Ala	Pro	Lys	Ala	Ala	Pro	Ala	Thr	Pro	Ala	Ala	Pro	
785					790				795						800	
Ala	Gln	Pro	Gly	Leu	Leu	Ser	Arg	Phe	Phe	Gly	Ala	Leu	Lys	Ala	Leu	
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Phe	Ser	Gly	Gly	Glu	Glu	Thr	Lys	Pro	Thr	Glu	Gln	Pro	Ala	Pro	Lys	
			820					825					830			
Ala	Glu	Ala	Lys	Pro	Glu	Arg	Gln	Gln	Asp	Arg	Arg	Lys	Pro	Arg	Gln	
		835					840					845				
Asn	Asn	Arg	Arg	Asp	Arg	Asn	Glu	Arg	Arg	Asp	Thr	Arg	Ser	Glu	Arg	
	850					855					860					
Thr	Glu	Gly	Ser	Asp	Asn	Arg	Glu	Glu	Asn	Arg	Arg	Asn	Arg	Arg	Gln	
865					870				875						880	
Ala	Gln	Gln	Gln	Thr	Ala	Glu	Thr	Arg	Glu	Ser	Arg	Gln	Gln	Ala	Glu	
				885					890					895		
Val	Thr	Glu	Lys	Ala	Arg	Thr	Ala	Asp	Glu	Gln	Gln	Ala	Pro	Arg	Arg	
			900					905					910			
Glu	Arg	Ser	Arg	Arg	Arg	Asn	Asp	Asp	Lys	Arg	Gln	Ala	Gln	Gln	Glu	
		915					920					925				
Ala	Lys	Ala	Leu	Asn	Val	Glu	Glu	Gln	Ser	Val	Gln	Glu	Thr	Glu	Gln	
	930					935					940					
Glu	Glu	Arg	Val	Arg	Pro	Val	Gln	Pro	Arg	Arg	Lys	Gln	Arg	Gln	Leu	
945					950				955						960	
Asn	Gln	Lys	Val	Arg	Tyr	Glu	Gln	Ser	Val	Ala	Glu	Glu	Ala	Val	Val	
			965					970						975		
Ala	Pro	Val	Val	Glu	Glu	Thr	Val	Ala	Ala	Glu	Pro	Ile	Val	Gln	Glu	
			980					985					990			
Ala	Pro	Ala	Pro	Arg	Thr	Glu	Leu	Val	Lys	Val	Pro	Leu	Pro	Val	Val	
		995					1000					1005				
Ala	Gln	Thr	Ala	Pro	Glu	Gln	Gln	Glu	Glu	Asn	Asn	Ala	Asp	Asn	Arg	
	1010					1015					1020					

Asp Asn Gly Gly Met Pro Ser Phe Ser Pro Leu Ala Ser Ser Pro Ala
 1025 1030 1035 1040

Arg Lys Trp Ser Ala Ser Ser Ser Leu Ser
 1045 1050

<210> 20
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: synthetic, no
 natural origin

<400> 20
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<210> 21
 <211> 72
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: synthetic, no
 natural origin

<400> 21
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 ccaaaccaaa cc 72

<210> 22
 <211> 71
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: synthetic, no
 natural origin

<400> 22
 ctacccctcg agtttagtga tggatgatggt gatgagcggc cgcgtcgact gcagagacag 60
 tgaccagagt c 71

<210> 23
 <211> 88
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: synthetic, no

natural origin

<400> 23

ccctcactcg agtttagagc tcatttttct cagatccacg agcgcccgca gaacctccac 60
ctccgtcgac tgcagagaca gtgaccag 88

<210> 24

<211> 1561

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 24

gaattcgtat ttttacaaca attaccaaca acaacaacaa caacaacatt acaattacta 60
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gcggtgggccc acccaataga gtttaattaat ttatgtacta atgccttagg aaatcagttt 180
caaacacaac aagctcgaac tgtcgtttcaa agacaattca gtgaggtgtg gaaaccttca 240
ccacaagtaa ctgttaggtt ccctgacagt gactttaagg tgtacaggta caatgcggta 300
ttagaccgcg tagtcacagc actgttaggt gcattcgaca ctagaaatag aataatagaa 360
gttgaaaatc aggcgaaccc cagcactgcc gaaacgttag atgctactcg tagagtagac 420
gacgcaacgg tggccataag gagcgcgata aataatttaa tagtagaatt gatcagagga 480
accggatctt ataatcggag ctctttcgag agctcttctg gtttggtttg gacctctggt 540
cctgcaactg gaggcggcgg aagtggaggt ggaggttctg acgtcgtgct gacctctgt 600
ccagcaatca tgtctgcac tccaggggag aaggtaacca tgacctgcag tgccagttca 660
agtgtaaagta aaatgcaatg gtatcagcag aagtcaggca cctcccccaa aagatggatt 720
tatgacacat ccaaactggc ctctggagtc cctggctcgt tcagtggcag tgggtctggg 780
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tcttgatcgc cgcgggtcaa atgtatatg ttcataata tccgcaggca cgtaataaag 1500
cgaggggttc gaatcccccc gttacccccg gtaggggccc aggtaccggc gcgcctctag 1560
a 1561

<210> 25

<211> 1582

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 25

gaattcgtat ttttacaaca attaccaaca acaacaacaa caacaacatt acaattacta 60

tttacaagga	ccatggctta	cagtatcact	actccatctc	agttcgtggt	cttgtcatca	120
gcgtgggccc	acccaataga	gttaattaat	ttatgtacta	atgccttagg	aaatcagttt	180
caaacacaac	aagctcgaac	tgtcgttcaa	agacaattca	gtgaggtgtg	gaaaccttca	240
ccacaagtaa	ctgttaggtt	ccctgacagt	gactttaagg	tgtacaggta	caatgcggta	300
ttagaccgcg	tagtcacagc	actgttaggt	gcattcgaca	ctagaaatag	aataatagaa	360
gttgaaaatc	aggcgaaccc	cacgactgcc	gaaacgttag	atgctactcg	tagagtagac	420
gacgcaacgg	tggccataag	gagcgcgata	aataatttaa	tagtagaatt	gatcagagga	480
accggatctt	ataatcggag	ctcttttcgag	agctcttctg	gtttggtttg	gacctctggt	540
cctgcaactg	gaggcggcgg	aagtggaggt	ggaggttctg	acgtcgtgct	gacccagtct	600
ccagcaatca	tgtctgcatc	tccaggggag	aaggtcacca	tgacctgcag	tgccagttca	660
agtgtaacga	aaatgcaatg	gtatcagcag	aagtcaggca	cctcccccaa	aagatggatt	720
tatgacacat	ccaaactggc	ctctggagtc	cctggtcgct	tcagtggcag	tggttctggg	780
acctcttact	ctctcacaa	cagcagcatg	gaggctgaag	atgctgccac	ttattactgc	840
cagcagtggg	gtagtaaccc	gctcacgttc	ggtgctggga	ccaagctgga	gataaaaggc	900
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ggacctgagc	tggtaaatac	tggggcttca	gtgaagatgt	cctgcaaggc	ctctggatac	1020
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attggatata	ttaatcctaa	caaagacggg	acaaagttca	atgagaagtt	caaaggcaag	1140
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tctgaggact	ctgcggtcta	ttactgtgca	agagactatg	attacgactg	gtttgcttac	1260
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taacggattg	tgtccgtaat	cacacgtggg	gcgtacgata	acgcatagtg	tttttccctc	1440
cacttaaatc	gaagggttgt	gtcttggatc	gcgcgggtca	aatgtatatg	gttcatatac	1500
atccgcaggc	acgtaataaa	gcgaggggtt	cgaatccccc	cgttaccccc	ggtagggggc	1560
caggtaccgg	cgcgccctca	ga				1582

<210> 26

<211> 1059

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no natural origin

<400> 26

gaattcgtat	ttttacaaca	attaccaaca	acaacaacaa	caacaacatt	acaattacta	60
tttacaagga	ccatggccca	aattgtttct	accagttctc	cagcaatcat	gtctgcatct	120
ccaggggaga	aggtcaccat	gacctgcagt	gccagttcaa	gtgtaagtaa	aatgcaatgg	180
tatcagcaga	agtcaggcac	ctcccccaaa	agatggattt	atgacacatc	caaactggcc	240
tctggagtcc	ctggtcgctt	cagtggcagt	gggtctggga	cctcttactc	tctcacaaatc	300
agcagcatgg	aggctgaaga	tgctgccact	tattactgcc	agcagtggag	tagtaacccg	360
ctcacgttcg	gtgctgggac	caagctggag	ataaaaaggct	ctactagtgg	ttccgggaag	420
agctctgaag	gtaaaaggta	ggtccagctg	cagcagttct	gacctgagct	ggtaaatcct	480
ggggcttcag	tgaagatgtc	ctgcaaggcc	tctggataca	cattcattac	ctatgttatg	540
cactgggtga	agcagaagcc	tgggcagggc	cttgagtggg	ttggatata	taatcctaac	600
aaagacggta	caaagttcaa	tgagaagttc	aaaggcaagg	ccacactgac	ttcagacaaa	660
tcttccaaca	cagcctacat	ggagctcagc	agcctgacct	ctgaggactc	tgcggtctat	720
tactgtgcaa	gagactatga	ttacgactgg	tttgcttact	ggggccaggg	gactctggtc	780
actgtctctg	cagtcgacgc	ggccgctcat	caccatcacc	atcactagct	cgaggggtag	840
tcaagatgca	taataaataa	cggatttgtg	ccgtaatcac	acgtgggtgc	tacgataacg	900
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gtatatggtt	catatacatc	cgcaggcacg	taataaagcg	aggggttcga	atccccccgt	1020
tacccccggt	aggggcccag	gtaccggcgc	gcctctaga			1059

<210> 27
 <211> 1077
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no natural origin

<400> 27

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gaattcgat ttttacaaca attaecaaca acaacaacaa caacaacatt acaattacta 60
tttacaagga ccatggaaat tgttctcacc cagtctccag caatcatgtc tgcattctcca 120
ggggagaagg tcaccatgac ctgcagtgcc agttcaagtg taagtaaaat gcaatggat 180
cagcagaagt caggcacctc ccccaaaaga tggatttatg acacatccaa actggcctct 240
ggagtccctg gtcgcttcag tggcagtggg tctgggacct ctactctct cacaatcagc 300
agcatggagg ctgaagatgc tgccacttat tactgccagc agtggagtag taacccgctc 360
acgttcggtg ctgggaccaa gctggagata aaaggctcta ctagtggttc cgggaagagc 420
tctgaaggta aagggtgagg ccagctgcag cagtctggac ctgagctggg aaatcctggg 480
gcttcagtga agatgtcctg caaggcctct ggatacacat tcattacctt tggtatgcac 540
tgggtgaagc agaagcctgg gcagggcctt gagtggattg gatataatta tcctaacaaa 600
gacggtacaa agttcaatga gaagttcaaa ggcaaggcca cactgacttc agacaaatcc 660
tccaacacag cctacatgga gctcagcagc ctgacctctg aggactctgc ggtctattac 720
tgtgcaagag actatgatta cgactggttt gcttactggg gccaggggac tctggtcact 780
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gtggtgcgta cgataacgca tagtgttttt ccctccactt aaatcgaagg gttgtgtctt 960
ggatcgcgcg ggtcaaagt atattggttca tatacatccg caggcacgta ataaagcgag 1020
gggttcgaat cccccgtta cccccggtag gggcccagggt accggcgcgcg ctctaga 1077

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<210> 28
 <211> 1654
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no natural origin

<400> 28

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gaattcgat ttttacaaca attaccaaca acaacaacaa caacaacatt acaattacta 60
tttacaagga ccattatgga ctttcaagtg cagattttca gcttcctcct catcagcgcc 120
tcagttatca tctctagggg atccatggct tacagtatca ctactccatc tcagttcgtg 180
ttcttgatc cagcgtgggc cgacccaata gagttaatta atttatgtac taatgcctta 240
ggaaatcagt ttcaaacaca acaagctcga actgtcgttc aaagacaatt cagtgggtg 300
tggaacctt caccacaagt aactgttagg ttccctgaca gtgactttaa ggtgtacagg 360
tacaatgcgg tattagaccg gctagtcaca gcaactgttag gtgcattcga cactagaaat 420
agaataatag aagttgaaaa tcaggcgaac ccacgactg ccgaaacgtt agatgctact 480
cgtagagtag acgacgcaac ggtggccata aggagcgga taaataattt aatagtagaa 540
ttgatcagag gaacgggatc ttataatcgg agctctttcg agagctcttc tggtttggtt 600
tggacctctg gtctgcaac tggaggcggc ggaagtggag gtggagggtt tgacgtcgtg 660
ctgacctagt ctccagcaat catgtctgca tctccagggg agaaggtcac catgacctgc 720
agtgccagtt caagtgtaa taaaatgcaa tggatatcagc agaagtcagg cacctcccc 780
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acttattact gccagcagtg gtagtagaac ccgctcacgt tcggtgctgg gaccaagctg 960

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gagataaaag gctctactag tgggtccggg aagagctctg aaggtaaagg tgaggtccag 1020
 ctgcagcagt ctggacctga gctggtaa at cctggggctt cagtgaagat gtcctgcaag 1080
 gcctctggat acacattcat tacctatgtt atgcactggg tgaagcagaa gcctgggcaag 1140
 ggcccttgagt ggattggata tattaatcct aacaaagacg gtacaaagtt caatgagaag 1200
 ttcaaaggca aggccacact gacttcagac aaatcctcca acacagccta catggagctc 1260
 agcagcctga cctctgagga ctctgcggtc tattactgtg caagagacta tgattacgac 1320
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 gggtctgcgg ccgctcgtgg atctgagaaa gatgagctct aaactcgagg ggtagtcaag 1440
 atgcataata aataacggat tgtgtccgta atcacacgtg gtgcgtacga taacgcatag 1500
 tgtttttccc tcactttaa tcgaagggtt gtgtcttgga tcgcgcgggt caaatgtata 1560
 tggttcatat acatccgcag gcacgtaata aagcgagggg ttcgaaatccc cccgttacc 1620
 ccggtagggg cccaggtacc ggcgcgcctc taga 1654

<210> 29
 <211> 259
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: synthetic, no
 natural origin

<400> 29
 Glu Val His Cys Lys Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Leu Ser Cys Arg Ala Ser Asp Tyr Thr Phe Thr Ser Tyr
 20 25 30
 Tyr Met Tyr Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Gly Glu Ile Lys Pro Ser Gly Asn Gly Thr Asn Phe Asn Glu Lys Phe
 50 55 60
 Lys Ser Lys Ala Thr Leu Thr Ser Asp Tyr Ser Ser Ser Thr Ala Tyr
 65 70 75 80
 Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
 85 90 95
 Thr Arg Ser Gly Asn Ala Met Asp Tyr Trp Gly Gln Gly Thr Thr Val
 100 105 110
 Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
 115 120 125
 Gly Gly Ser Asp Ile Val Leu Thr Leu Ser Pro Ala Thr Leu Ser Val
 130 135 140
 Thr Pro Gly Asp Arg Val Ser Leu Ser Cys Arg Ala Ser Gln Ser Ile
 145 150 155 160
 Ser Asn Phe Leu His Trp Tyr Gln Gln Lys Ser His Glu Ser Pro Arg
 165 170 175

Leu Leu Ile Lys Tyr Thr Ser Gln Ser Ile Ser Gly Ile Pro Ser Thr
 180 185 190
 Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Ser Ile Asn Ser
 195 200 205
 Val Asp Thr Glu Asp Phe Gly Met Tyr Phe Cys Gln Gln Ser Asn Ser
 210 215 220
 Trp Pro His Arg Phe Gly Ser Gly Ile Lys Leu Glu Leu Lys Ser Ala
 225 230 235 240
 Val Asp Ala Ala Ala Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Asn
 245 250 255
 Gly Ala Ala

<210> 30
 <211> 267
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: synthetic, no
 natural origin

<400> 30
 Glu Val Lys Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Ile Ser Cys Lys Ala Ser Asp Tyr Ser Phe Thr Gly Tyr
 20 25 30
 Asn Met Asn Trp Val Lys Gln Ser His Gly Lys Ser Leu Glu Trp Ile
 35 40 45
 Gly Asn Ile Asn Pro Tyr Tyr Gly Ser Thr Ser Tyr Asn Gln Lys Phe
 50 55 60
 Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr
 65 70 75 80
 Met Gln Leu Asn Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
 85 90 95
 Ala Val Gly Gly Asn Tyr Val Asp Trp Phe Ala Tyr Trp Gly Gln Gly
 100 105 110
 Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
 115 120 125
 Ser Gly Gly Gly Gly Ser Asp Ile Leu Leu Thr Gln Ser Pro Leu Ser
 130 135 140

Leu Pro Val Ser Leu Gly Asp His Ala Ser Ile Ser Cys Arg Ser Ser
145 150 155 160

Gln Ser Leu Val His Ser Asn Gly Asn Thr Tyr Leu His Trp Tyr Leu
165 170 175

Gln Asn Pro Gly Gln Ser Pro Lys Leu Leu Ile Tyr Lys Val Ser Asn
180 185 190

Arg Phe Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr
195 200 205

Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Leu Gly Val
210 215 220

Tyr Phe Cys Ser Gln Ser Thr His Val Pro Tyr Thr Phe Gly Gly Gly
225 230 235 240

Thr Lys Leu Glu Leu Lys Arg Ala Val Asp Ala Ala Ala Glu Gln Lys
245 250 255

Leu Ile Ser Glu Glu Asp Leu Asn Gly Ala Ala
260 265

<210> 31

<211> 58

<212> DNA

<213> Artificial Sequence Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no natural origin

<400> 31

catgccatga ctgcgcggccc agccggccat ggccgagktr cagcttcagg agtcragg 58

<210> 32

<211> 57

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no natural origin

<400> 32

catgccatga ctgcgcggccc agccggccat ggcccagggtg magctgawgg artctgg 57

<210> 33

<211> 60

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no natural origin

<400> 33
catgccatga ctgcgggcc agccggccat ggccgaggtc cagctrcarc artctggacc 60

<210> 34
<211> 56
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic, no natural origin

<400> 34
catgccatga ctgcgggcc agccggccat ggcccaggtw cagctscagc agtctg 56

<210> 35
<211> 58
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic, no natural origin

<400> 35
catgccatga ctgcgggcc agccggccat ggccsaggtc carctgcags arytggr 58

<210> 36
<211> 58
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic, no natural origin

<400> 36
catgccatga ctgcgggcc agccggccat ggccgaggtt cagctgcagc agtctggg 58

<210> 37
<211> 58
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic, no natural origin

<400> 37
catgccatga ctgcgggcc agccggccat ggccgargtg aagctggtgg artctggr 58

<210> 38
 <211> 58
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: synthetic, no natural origin

 <400> 38
 catgccatga ctgcgggccc agccggccat ggccgaggtg aagstymtcg agtctgga 58

 <210> 39
 <211> 57
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: synthetic, no natural origin

 <400> 39
 catgccatga ctgcgggccc agccggccat ggccgargtg aagctkgakg agwctgr 57

 <210> 40
 <211> 58
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: synthetic, no natural origin

 <400> 40
 catgccatga ctgcgggccc agccggccat ggccgavgtg mwgctkggtg agtctggk 58

 <210> 41
 <211> 59
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: synthetic, no natural origin

 <400> 41
 catgccatga ctgcgggccc agccggccat ggccgaggtg carctkgttg agtctggtg 59

 <210> 42
 <211> 58
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: synthetic, no natural origin

<400> 42
 catgccatga ctgcgggccc agccggccat ggccsaggtg cagctkcagc agtctgga 58

<210> 43
 <211> 58
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: synthetic, no natural origin

<400> 43
 catgccatga ctgcgggccc agccggccat ggcccagatc cagttggtgc agtctgga 58

<210> 44
 <211> 58
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: synthetic, no natural origin

<400> 44
 catgccatga ctgcgggccc agccggccat ggcccaggts cacstgrwgs agtctggg 58

<210> 45
 <211> 49
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: synthetic, no natural origin

<400> 45
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<210> 46
 <211> 57
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: synthetic, no natural origin

<400> 46
 catgccatga ctgcgggccc agccggccat ggccgatgtg aacttggaag tgtctgg 57

<210> 47
 <211> 48
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: synthetic, no natural origin

 <400> 47
 catgccatga ctgcgggcgc gcctgacatt gtgmtgwchc agtctcca 48

 <210> 48
 <211> 47
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: synthetic, no natural origin

 <400> 48
 catgccatga ctgcgggcgc gcctgacatt cagatgattc agtctcc 47

 <210> 49
 <211> 47
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: synthetic, no natural origin

 <400> 49
 catgccatga ctgcgggcgc gcctgacatt gttctcwhcc agtctcc 47

 <210> 50
 <211> 48
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: synthetic, no natural origin

 <400> 50
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 <210> 51
 <211> 48
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: synthetic, no natural origin

 <400> 51
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 <210> 52
 <211> 48

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: synthetic, no natural origin

 <400> 52
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 <210> 53
 <211> 46
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: synthetic, no natural origin

 <400> 53
 catgccatga ctgcgggcgc gcctgacatt gtgatgaccc arbhtg 46

 <210> 54
 <211> 47
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: synthetic, no natural origin

 <400> 54
 catgccatga ctgcgggcgc gcctgatatt ktgatgaccc araytcc 47

 <210> 55
 <211> 48
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: synthetic, no natural origin

 <400> 55
 catgccatga ctgcgggcgc gcctramatt gtgmtgaccc aatytccw 48

 <210> 56
 <211> 48
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: synthetic, no natural origin

 <400> 56
 catgccatga ctgcgggcgc gcctsaaawt gtkotsaccc agtctcca 48

<210> 57
 <211> 47
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: synthetic, no natural origin

 <400> 57
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 <210> 58
 <211> 47
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: synthetic, no natural origin

 <400> 58
 catgccatga ctgcgggcgc gcctgayaty cagatgachc agwctcc 47

 <210> 59
 <211> 47
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: synthetic, no natural origin

 <400> 59
 catgccatga ctgcgggcgc gcctgacatt gtgatgactc aggctac 47

 <210> 60
 <211> 46
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 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: synthetic, no natural origin

 <400> 60
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 <210> 61
 <211> 46
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 <220>
 <223> Description of Artificial Sequence: synthetic, no natural origin

<400> 61
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<210> 62
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<220>
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<400> 62
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<210> 63
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<400> 63
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<210> 64
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<400> 64
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<210> 65
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<400> 65
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<210> 66
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 <400> 66
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 <400> 67
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 <210> 68
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 <400> 68
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 <210> 69
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 <220>
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 <210> 70
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 <220>
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 <400> 70
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 <210> 71
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<220>

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<400> 71

ctagtgttac tccacgcggc cgcgtcgacc tgrcctagga cagtsasytt ggt 53

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<213> Artificial Sequence

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<400> 96
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<210> 97
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<210> 98
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<210> 99
<211> 27
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<220>
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<210> 100
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<210> 101
<211> 27
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<220>
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<400> 101
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<210> 102
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<220>
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<400> 102
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<210> 103
<211> 29
<212> DNA
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<220>
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<400> 103
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<210> 104
<211> 21
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<400> 104
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<210> 105
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<212> DNA
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<220>
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<400> 105
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<210> 106
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<212> DNA
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<220>
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<210> 107
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<220>
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<400> 107
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<210> 108
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
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<400> 108
000

<210> 109
<211> 29

<212> DNA
<213> Artificial Sequence

<220>
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<400> 109
000

<210> 110
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic, no natural origin

<400> 110
000

<210> 111
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic, no natural origin

<400> 111
000

<210> 112
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic, no natural origin

<400> 112
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<210> 113
<211> 257
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 113
Met Ala Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro
1 5 10 15

Gly	Ala	Ser	Val	Lys	Met	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr			
			20						25					30				
Asn	Tyr	Asn	Met	His	Trp	Val	Lys	Gln	Thr	Pro	Gly	Gln	Gly	Leu	Glu			
		35						40					45					
Trp	Ile	Gly	Ala	Ile	Tyr	Pro	Arg	Asn	Gly	Asp	Thr	Ser	Tyr	Asn	Gln			
	50						55					60						
Lys	Phe	Lys	Gly	Lys	Ala	Thr	Leu	Thr	Ala	Asp	Lys	Ser	Ser	Ser	Thr			
	65				70					75					80			
Ala	Tyr	Met	Gln	Leu	Ser	Ser	Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val	Tyr			
				85					90					95				
Tyr	Cys	Ala	Arg	Pro	Asp	Val	Trp	Gly	Ala	Gly	Thr	Leu	Leu	Thr	Val			
			100					105					110					
Ser	Ala	Gly	Ala	Gly	Pro	Thr	Ser	Gly	Ser	Gly	Lys	Pro	Gly	Pro	Gly			
		115					120					125						
Glu	Gly	Ser	Thr	Lys	Gly	Ala	Pro	Asp	Val	Leu	Met	Thr	Gln	Ala	Pro			
	130					135					140							
Leu	Thr	Leu	Ser	Val	Thr	Ile	Gly	Gln	Pro	Ala	Ser	Ile	Ser	Cys	Lys			
	145				150					155					160			
Ser	Ser	Gln	Ser	Leu	Leu	Asp	Gly	Asp	Gly	Lys	Thr	Tyr	Leu	Asn	Trp			
				165					170					175				
Leu	Leu	Gln	Arg	Pro	Gly	Gln	Ser	Pro	Lys	Arg	Leu	Ile	Tyr	Leu	Val			
			180					185					190					
Ser	Lys	Leu	Asp	Ser	Gly	Val	Pro	Asp	Arg	Phe	Thr	Gly	Ser	Gly	Ser			
		195					200					205						
Gly	Thr	Asp	Phe	Thr	Leu	Lys	Ile	Ser	Arg	Val	Glu	Ala	Glu	Asp	Leu			
	210					215					220							
Gly	Val	Tyr	Tyr	Cys	Trp	Gln	Gly	Thr	His	Phe	Pro	His	Thr	Phe	Gly			
	225				230					235					240			
Gly	Gly	Thr	Lys	Leu	Glu	Ile	Lys	Arg	Ala	Arg	Ala	Val	Asp	Ala	Ala			
			245					250						255				

Ala

<210> 114

<211> 259

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 114

Met Ala Gln Val Thr Leu Lys Glu Ser Gly Pro Gly Ile Leu Lys Pro
1 5 10 15

Ser Gln Thr Leu Ser Leu Thr Cys Ser Phe Ser Gly Phe Ser Leu Ser
20 25 30

Thr Ser Gly Met Gly Val Gly Trp Ile Arg Gln Pro Ser Gly Lys Gly
35 40 45

Leu Glu Trp Leu Ala His Ile Trp Trp Asp Asp Asp Lys Tyr Tyr Asn
50 55 60

Pro Ser Leu Arg Ser Gln Leu Thr Ile Ser Lys Asp Thr Ser Arg Asn
65 70 75 80

Gln Val Phe Leu Arg Ile Thr Asn Val Asp Thr Ala Asp Thr Ala Thr
85 90 95

Tyr Tyr Cys Ala Arg Gly Tyr Tyr Gly Asn Asp Ser Pro Phe Ala Tyr
100 105 110

Trp Gly Gln Gly Thr Leu Leu Thr Val Ser Ser Gly Ala Gly Pro Thr
115 120 125

Ser Gly Ser Gly Lys Pro Gly Pro Gly Glu Gly Ser Thr Lys Gly Ala
130 135 140

Pro Asp Ile Val Leu Ser Gln Ser Pro Lys Phe Met Ser Thr Ser Val
145 150 155 160

Gly Asp Arg Val Ser Ile Thr Cys Lys Ala Ser Gln Ile Val Arg Thr
165 170 175

Ala Val Ala Trp Phe Gln Gln Lys Pro Gly Gln Ser Pro Lys Ala Leu
180 185 190

Ile Tyr Leu Ala Ser Asn Arg His Thr Gly Val Pro Asp Arg Phe Thr
195 200 205

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Asn Val Gln
210 215 220

Ser Glu Asp Leu Ala Asp Tyr Phe Cys Leu Gln His Trp Asn Tyr Pro
225 230 235 240

Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys Arg Ala Val Asp
245 250 255

Ala Ala Ala

<210> 115
 <211> 259
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no
 natural origin

<400> 115

Met	Ala	Gln	Ile	Gln	Leu	Val	Gln	Ser	Gly	Pro	Glu	Leu	Lys	Lys	Pro
1				5					10					15	
Gly	Gln	Thr	Val	Lys	Ile	Ser	Cys	Lys	Ala	Ser	Ala	Tyr	Thr	Phe	Thr
			20					25					30		
Asp	Tyr	Ser	Met	His	Trp	Val	Lys	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Lys
		35					40					45			
Trp	Met	Gly	Trp	Ile	Asn	Thr	Glu	Thr	Gly	Glu	Pro	Thr	Tyr	Ala	Asp
	50					55					60				
Asp	Phe	Lys	Gly	Arg	Phe	Ala	Phe	Ser	Leu	Glu	Thr	Ser	Ala	Ser	Thr
	65				70					75					80
Ala	Tyr	Leu	Gln	Ile	Asn	Thr	Leu	Lys	Asn	Glu	Asp	Ser	Ala	Thr	Tyr
			85						90						95
Phe	Cys	Ala	Arg	Gly	Ser	Gly	Phe	Asn	Pro	Tyr	Trp	Gly	Gln	Gly	Thr
		100						105					110		
Leu	Val	Thr	Val	Ser	Ala	Gly	Ala	Gly	Pro	Thr	Ser	Gly	Ser	Gly	Lys
	115						120					125			
Pro	Gly	Pro	Gly	Glu	Gly	Ser	Thr	Lys	Gly	Ala	Pro	Asp	Ile	Val	Leu
	130					135					140				
Ser	Gln	Ser	Pro	Ser	Ser	Leu	Ala	Val	Ser	Val	Gly	Glu	Lys	Val	Thr
	145				150					155					160
Met	Ser	Cys	Lys	Ser	Ser	Gln	Ser	Leu	Leu	Tyr	Ser	Ser	Asn	Gln	Lys
			165						170					175	
Asn	Tyr	Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ser	Pro	Lys	Leu
		180						185					190		
Leu	Ile	Tyr	Trp	Ala	Ser	Thr	Arg	Glu	Ser	Gly	Val	Pro	Asp	Arg	Phe
	195						200					205			
Thr	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Asn	Ser	Val
	210					215					220				
Lys	Ala	Glu	Asp	Leu	Ala	Val	Tyr	Tyr	Cys	Gln	Gln	Tyr	Tyr	Ser	Tyr
	225				230					235					240
Val	Thr	Phe	Gly	Ala	Gly	Thr	Lys	Leu	Glu	Ile	Lys	Arg	Ala	Val	Asp
			245						250					255	

Ala Ala Ala

<210> 116
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 116
Asn Leu Ile Val Glu Leu Ile Arg Gly Thr Gly Ser
1 5 10

<210> 117
<211> 8
<212> PRT
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<220>
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<220>
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<223> X is Val or Cys

<400> 117

Lys Thr Asp Leu Xaa Arg Ala Thr
1 5

<210> 118
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 118
Arg Ile Val Ile Cys Gly Arg Val Thr
1 5

<210> 119
<211> 8
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<223> Description of Artificial Sequence: synthetic, no natural origin

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<221> misc_feature

<222> (5)..(5)

<223> Xaa is Pro or Ala

<400> 119

Arg Gly Thr Leu Xaa Arg Gly Thr

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<210> 120

<211> 9

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natural origin

<400> 120

Val Gly Arg Gln Arg Asp Thr Gln Ser

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<210> 121

<211> 9

<212> PRT

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natural origin

<400> 121

Phe Leu Arg Val Asp Ala Arg Glu Thr

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<210> 122

<211> 9

<212> PRT

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natural origin

<400> 122
Val Ala Gly Met Leu Gly Lys Gly Thr
1 5

<210> 123
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<222> (5)..(5)
<223> Xaa is Ala or Asn

<400> 123
Arg Trp Glu Leu Xaa Arg Ser Thr
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<210> 124
<211> 8
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<222> (5)..(5)
<223> Xaa is Gly or Thr

<400> 124
Pro Ser Ala Leu Xaa Arg Glu Thr
1 5

<210> 125
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<220>
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<222> (5)..(5)
<223> Xaa is Val or Ser

<400> 125

Lys Asn Asp Leu Xaa Arg Ala Thr
1 5

<210> 126

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 126

Gln Ile Val Ser Ala Trp Arg Glu Thr
1 5

<210> 127

<211> 10

<212> PRT

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<223> Description of Artificial Sequence: synthetic, no natural origin

<220>

<221> misc_feature

<222> (4)..(4)

<223> Xaa is Pro or Ala

<400> 127

Cys Ala Leu Xaa Arg His Ile Gly Arg Cys
1 5 10

<210> 128

<211> 10

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: synthetic, no natural origin

<220>

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<222> (4)..(4)

<223> Xaa is Pro or Ala

<400> 128

Cys Gln Leu Xaa Arg Ala Thr Ser Ser Cys
1 5 10

<210> 129
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<212> PRT
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<220>
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natural origin

<400> 129
Cys Ile Thr Ser Gln Arg Glu Thr Gly Trp Cys
1 5 10

<210> 130
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
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natural origin

<400> 130
Cys Arg Arg Ser Thr Thr Gly Ile Cys
1 5

<210> 131
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<222> (6)..(6)
<223> Xaa is Tyr or Lys

<400> 131
Cys Ser Thr Thr Leu Xaa Arg Gly Thr Cys
1 5 10

<210> 132
<211> 8

<212> PRT
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<220>
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<220>
<221> misc_feature
<222> (5)..(5)
<223> Xaa is Pro or Ala

<400> 132

Arg Val Asp Leu Xaa Arg Glu Thr
1 5

<210> 133
<211> 12
<212> PRT
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<220>
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natural origin

<400> 133
Lys His Ile Lys Asp Trp Glu His Leu Glu Glu Phe
1 5 10

<210> 134
<211> 9
<212> PRT
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<220>
<223> Description of Artificial Sequence: synthetic, no
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<400> 134
Lys Arg Lys Asp Gly Glu His Trp Leu
1 5

<210> 135
<211> 9
<212> PRT
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<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 135
Arg Gln Ala Lys Ser Trp Ser Ser Leu
1 5

<210> 136
<211> 9
<212> PRT
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<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 136
Tyr Gln Ala Lys Glu Trp Ser Asn Leu
1 5

<210> 137
<211> 9
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natural origin

<400> 137
Lys Asp Trp Glu His Arg Val Pro Ser
1 5

<210> 138
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natural origin

<400> 138
Lys Asp Trp Glu His Leu
1 5

<210> 139
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<220>
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natural origin

<400> 139
Lys Asp Trp Ser His Leu
1 5

<210> 140
<211> 12
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natural origin

<400> 140
Pro Lys Ser Asp Pro Gln Met Gly Lys Arg Arg Arg
1 5 10

<210> 141
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
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natural origin

<400> 141
His Pro Arg Pro Gln Leu Ala Ser Leu
1 5

<210> 142
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 142
His Pro Asp Pro Gln Ser Ser His Ser
1 5

<210> 143
<211> 9

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 143
Arg Phe Thr Asp Pro Gln Leu His Pro
1 5

<210> 144
<211> 9
<212> PRT
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<220>
<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 144
Lys Gln Asp Pro Gln Gln Gln Lys Gln
1 5

<210> 145
<211> 9
<212> PRT
<213> Artificial Sequence

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<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 145
Val Pro Asp Ser Gln Leu Glu Trp Pro
1 5

<210> 146
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 146
His Cys Asp Pro Gln Leu Tyr Gln Glu
1 5

<210> 147
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 147
Asp Pro Gln Met Phe Arg Arg His Cys
1 5

<210> 148
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 148
Phe Lys Asp Gly Gln Leu Arg Pro Gln
1 5

<210> 149
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 149
Cys Pro Asp Pro Gln Leu Arg Leu His Arg Cys
1 5 10

<210> 150
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 150
Cys Pro Asp Pro Gln Leu Asn Gly Thr Arg Cys

<210> 151

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 151

Cys Pro Asp Pro Gln Leu Ser Ser Leu Arg Cys
1 5 10

<210> 152

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 152

Cys Pro Asp Pro Gln Leu Arg Leu His Arg Cys
1 5 10

<210> 153

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 153

Cys Pro Asp Pro Gln Leu Thr Leu His Arg Cys
1 5 10

<210> 154

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 154
Cys Pro Asp Pro Gln Leu Ser Leu Gln Arg Cys
1 5 10

<210> 155
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 155
Cys Pro Asp Ala Gln Leu Ser Gly Thr Arg Cys
1 5 10

<210> 156
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 156
His Pro Asp Pro Gln Leu Ser Leu His Arg
1 5 10

<210> 157
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 157
gcggaattcg acgtcgccat gggctgggaa caactggagc ag

42

<210> 158
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic, no

natural origin

<400> 158

gcgaagcttg tcgaccggcg gtttgccggg ctggctg

37

<210> 159

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 159

gcggaattcg acgtcgccat ggccttctc ggcgacggcg gcgac

45

<210> 160

<211> 37

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 160

gcgaagcttg tcgaccggcg gtttgccggg ctggctg

37

<210> 161

<211> 1136

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no
natural origin

<400> 161

gaattcacac acaatcagat ttatagagag atttataaaa aaaaaaaaaac atatggactt 60
tcaagtgcag attttcagct tcctcctcat cagcgccctca gttatcatct ctaggggatc 120
catgggcttg gaacaactgg agcagtgcgg ctatccggtg cagcggttg tcgccctcta 180
cctggcgggc cggtgtcgt ggaaccaggt cgaccaggtg atccgcaacg ccctggccag 240
ccccggcagc ggcggcgacc tgggcgaagc gatccgcgag cagccggagc aggcccgtct 300
ggccctgacc ctggccgccc cgcagagcga gcgcttcgtc cggcagggca ccggcaacga 360
cgaggccggc gcggccaacg gcccggcgga cagcggcgac gccctgctgg agcgcaacta 420
tcccactggc gcggagttcc tcggcgacgg cggcgacgtc agcttcagca cccgcggcac 480
gcagaactgg acggtggagc ggctgctcca ggcgcaccgc caactggagg agcgcggtta 540
tgtgttcgtc ggctaccacg gcaccttcct cgaagcgggc caaagcatcg tcttcggcgg 600
ggtgcgcgcg cgcagccagg acctcgacgc gatctggcgc ggtttctata tcgccggcga 660
tccggcgctg gcctacggct acgcccagga ccaggaaccc gacgcacgcg gccggatccg 720
caacggtgcc ctgctgcggg tctatgtgcc gcgctcgagc ctgccgggct tctaccgcac 780
cagcctgacc ctggccgcgc cggaggcggc gggcgaggtc gaacggctga tcggccatcc 840
gctgccgctg gcctggagc ccatcaccgg ccccgaggag gaaggcgggc gcctggagac 900

cattctcggc	tggccgctgg	ccgagcgcac	cgtggtgatt	ccctcggcga	tccccaccga	960
cccgcgcaac	gtcggcggcg	acctcgaccc	gtccagcatc	cccgacaagg	aacaggcgat	1020
cagcgccctg	ccggactacg	ccagccagcc	cggcaaacgg	ccggtcgacg	gaggtggagg	1080
ttctaacctc	atcgttgaac	ttatccgcgg	taccggttct	taaactcgag	tctaga	1136

<210> 162

<211> 827

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no natural origin

<400> 162

gaattcacac	acaatcagat	ttatagagag	atttataaaa	aaaaaaaaaac	atatggactt	60
tcaagtgcag	attttcagct	tcctcctcat	cagcgcccca	gttatcatct	ctaggggata	120
catggccttc	ctcggcgacg	gcggcgacgt	cagcttcagc	acccgcggca	cgcagaactg	180
gacgggtggag	cggctgctcc	aggcgacacc	ccaactggag	gagcgcggtt	atgtgttcgt	240
cggctaccac	ggcaccttcc	tcgaagcggc	gcaaagcatc	gtcttcggcg	gggtgcgcgc	300
gcgcagccag	gacctcgacg	cgatctggcg	cggtttctat	atcgccggcg	atccggcgct	360
ggcctacggc	tacgcccagg	accaggaacc	cgacgcacgc	ggccggatcc	gcaacggtgc	420
cctgctgcgg	gtctatgtgc	cgcgctcgag	cctgcccggc	ttctaccgca	ccagcctgac	480
cctggcccgcg	ccggaggcgg	cgggcgaggt	cgaacggctg	atcgcccatc	cgctgccgct	540
gcgcctggag	gccatcaccg	gccccgagga	ggaaggcggg	cgcttgagga	ccattctcgg	600
ctggccgctg	gcccagcgca	ccgtggtgat	tcctcggcg	atccccaccg	acccgcgcaa	660
cgtcggcggc	gacctcgacc	cgtccagcat	ccccgacaag	gaacaggcga	tcagcgccct	720
gccggactac	gccagccagc	ccggcaaac	gccggtcgac	ggaggtggag	gttctaacct	780
catcgttgaa	cttatccgcg	gtaccgggtc	ttaaactcga	gtctaga		827

<210> 163

<211> 1046

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic, no natural origin

<400> 163

gaattcacac	acaatcagat	ttatagagag	atttataaaa	aaaaaaaaaac	atatggattt	60
tcaagtgcag	attttcagct	tcctgctaata	cagtgcctca	gtcataatat	ctagaggaca	120
aattgttctc	accaggtctc	cagcaatcat	gtctgcatct	ccaggggaga	aggtcaccat	180
gacctgcagt	gccagttcaa	gtgtaagtaa	aatgcaatgg	tatcagcaga	agtcaggcac	240
ctcccccaaa	agatggattt	atgacacatc	caaactggcc	tctggagtcc	ctggctcgctt	300
cagtggcagt	gggtctggga	cctcttactc	tctcacaatc	agcagcatgg	aggctgaaga	360
tgctgccact	tattactgcc	agcagtggag	tagtaaccgg	ctcacgttcg	gtgctgggac	420
caagctggag	ataaaaggct	ctactagtgg	ttccgggaag	agctctgaag	gtaaagggtga	480
ggtccagctg	cagcagctctg	gacctgagct	ggtaaactct	ggggcttcag	tgaagatgtc	540
ctgcaaggcc	tctggatata	cattcattac	ctatgttatg	cactgggtga	agcagaagcc	600
tgggcagggc	cttgagtggg	ttggatatat	taatcctaac	aaagacggta	caaagttcaa	660
tgagaagttc	aaaggcaagg	ccacactgac	ttcagacaaa	tcctccaaca	cagcctacat	720
ggagctcagc	agcctgacct	ctgaggactc	tgcggtctat	tactgtgcaa	gagactatga	780
ttacgactgg	tttgcttact	ggggccaggg	gactctggtc	actgtctctg	cagtcgacga	840
acaaaaactc	atctcagaag	aggatctgaa	tgctgtgggc	caggacacgc	aggaggtcat	900

cgtaggtgcc cactccttgc cctttaaggt ggtggtgatc tcagccatcc tggccctggt 960
 ggtgctcacc atcatctccc ttatcatcct catcatgctt tggcagaaga agccacgtta 1020
 ggcggcgcgt cgagcatgca tctaga 1046

<210> 164
 <211> 12
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> Ribosome-inactivation is achieved in all cases through the cleavage of an N-glycosidic bond between ribose and the adenine at position 7 of this sequence which is located 250-400nt from the 3' end of 23S/25S/28S rRNA

<400> 164
 aguacgagag ga 12

<210> 165
 <211> 5
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Flexible linker

<400> 165

Gly Gly Gly Gly Ser
 1 5

<210> 166
 <211> 6
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Motif which functions to retain certain proteins in the ER

<400> 166

Leu Tyr Ser Leu Tyr Ser
 1 5

<210> 167
 <211> 4
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> C-terminal recognition sequence which functions to retain certain proteins in the ER

<400> 167

Lys Asp Glu Leu
 1

<210> 168
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Linker sequence

<400> 168

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1 5 10